

BUILDING ENGINEERING REPORT (BER)

Building Name: Federal Building – 517 Gold Avenue SW
 Building No.: NM0024ZZ
 Location: Albuquerque, New Mexico

Number: 410.1 – Electrical

DETAILED COST ESTIMATE

ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Replace and Upgrade 480/277V and 208/120V Distribution Systems				
Bus Duct	1500 (457.2)	LF (M)	\$16.60	\$24,900.00
480/277V Panels	24	EA	\$2,600.00	\$62,400.00
208/120V Panels	24	EA	\$2,000.00	\$48,000.00
45kVA Transformers	16	EA	\$2,800.00	\$44,800.00
Bus Duct Ells	12	EA	\$700.00	\$8,400.00
Bus Duct End Box	6	EA	\$160.00	\$960.00
Circuit Breakers	2000	EA	\$30.00	\$60,000.00
Electrical Removals	1	LS	\$14,400.00	\$14,400.00
Temporary Wiring	1	LS	\$14,400.00	\$14,400.00
Connect/Disconnect	1	LS	\$20,000.00	\$20,000.00
Subtotal				\$298,260.00
Mark-Up – 15% Contingency				\$44,739.00
Mark-Up – 18% Overhead and Profit				\$61,739.82
N.M. Gross Receipts Tax at 5.8125%				\$24,977.25
Total E. C. C.				\$429,716.07
Total E.C.C. (rounded)				\$430,000.00

BUILDING ENGINEERING REPORT (BER)

Building Name: Federal Building - 517 Gold Avenue SW
Building No: NM0024ZZ
Location: Albuquerque, New Mexico

WORK ITEM: Action required within 5 years X Action required within 5-20 years ____

Number: 410.2 - Electrical

Title: Replace Branch Circuit Wiring

Cost: FY 94: \$202,000 FY 98: \$275,000

DESCRIPTION:

Much of the existing branch circuit wiring is over thirty years old and the insulation has become brittle. Insulation is cracked and peeling at terminations in the electrical panelboards due to the accumulated heating effects.

It is recommended that the branch circuit wiring system from the lighting and power panels to the devices (receptacles, switches, light fixtures, etc.) be replaced to eliminate the unsafe wiring. It is also recommended that the loading on each branch circuit be checked and recircuited as necessary to eliminate any potential overload, and non-linear load problems resulting from existing inadequately sized neutrals.

JUSTIFICATION:

Replacement of the branch circuit wiring would minimize circuit protection tripping due to wire failures and overloaded branch circuits, and improve tenant and maintenance personnel safety.

Inadvertent tripping of branch circuits, which are a nuisance to building tenants and an added expense to the building maintenance costs, could be greatly reduced.

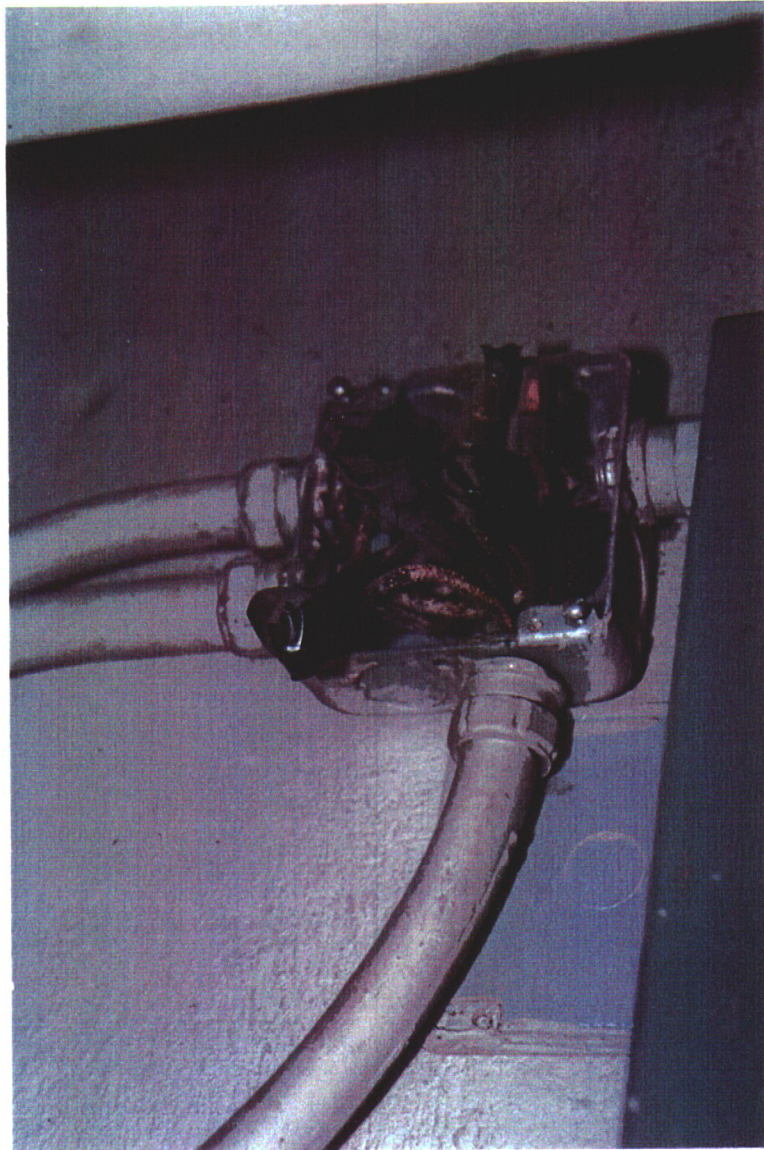
ASSOCIATED WORK ITEMS:

Replace and upgrade 480/277V and 208/120V Electrical Distribution Systems, Work Item No. 410.1.

BUILDING ENGINEERING REPORT

Building Name: Federal Building - 517 Gold Avenue SW
Building No.: NM0024ZZ
Location: Albuquerque, New Mexico

Number: 410.2 Electrical
Title: Replace Branch Circuit Wiring



Branch Circuit Wiring Junction Box

BUILDING ENGINEERING REPORT (BER)

Building Name: Federal Building – 517 Gold Avenue SW

Building No.: NM0024ZZ

Location: Albuquerque, New Mexico

Number: 410.2 – Electrical

DETAILED COST ESTIMATE

ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Replace Branch Circuits				
Electrical Removals	186803 (17,354.6)	SF (SM)	\$0.25	\$46,700.75
New Wiring	186803 (17,354.6)	SF (SM)	\$0.50	\$93,401.50
Subtotal				\$140,102.25
Mark-UP – 15% Contingency				\$21,015.34
Mark-Up – 18% Overhead and Profit				\$29,001.17
N.M. Gross Receipts Tax at 5.8125%				\$11,050.65
Total E. C. C.				\$201,169.41
Total E.C.C. (rounded)				\$202,000.00

BUILDING ENGINEERING REPORT (BER)

Building Name: Federal Building - 517 Gold Avenue SW
Building No: NM0024ZZ
Location: Albuquerque, New Mexico

WORK ITEM: Action required within 5 years X Action required within 5-20 years ____

Number: 410.3 - Electrical

Title: Replace Lighting on Sixth Floor

Cost: FY 94: \$109,000 FY 98: \$148,000

DESCRIPTION:

The sixth floor has a combination of, 1' x 4', suspended fluorescent and 2' x 4', surface-mounted fluorescent light fixtures with an existing gypsum board ceiling with glued-on acoustical tiles. It is assumed that the existing ballasts contain PCB's.

This work item is to replace the existing lighting on the sixth floor with, 2' x 4', parabolic fluorescent type fixtures, with energy-efficient electronic ballasts and T-8 lamps. The existing ceiling will need to be replaced with a new lay-in ceiling. The resulting product will match the upgrades which are to be or have been implemented on the other building floors.

JUSTIFICATION:

The electrical energy consumption savings for upgrading to the electronic ballasts and T-8 lamps would be 40%. Additionally, energy consumption for cooling the building would be reduced, due to the reduced heat load produced by the new light fixtures.

Eye strain of tenants, due to the flickering effect caused by the 60Hz operation of conventional fluorescent light, would be reduced by the use of high frequency (20kHz+) electronic ballasts.

Harmonics in the lighting branch circuiting would be reduced due to the lower total harmonic distortion produced by electronic ballasts. This would improve the overall power quality of the electrical distribution system.

The aesthetic value of the sixth floor would be improved by upgrading the space to current office design standards. This would increase the building's lease potential.

BUILDING ENGINEERING REPORT (BER)

Building Name: Federal Building - 517 Gold Avenue SW
Building No: NM0024ZZ
Location: Albuquerque, New Mexico

Number: 410.3 - Electrical

JUSTIFICATION: (Continued)

Replacement of the existing ceiling system with a new lay-in ceiling system would improve access to the above-ceiling space, simplifying future building modifications.

ASSOCIATED WORK ITEMS:

Retrofit existing building lighting (exclusive of the sixth floor) Work Item No. 469.1, Remove and Replace Ceiling System at Sixth Floor, Work Item No. 310.4.

BUILDING ENGINEERING REPORT

Building Name: Federal Building - 517 Gold Avenue SW
Building No.: NM0024ZZ
Location: Albuquerque, New Mexico

Number: 410.3 Electrical
Title: Replace Lighting on Sixth Floor



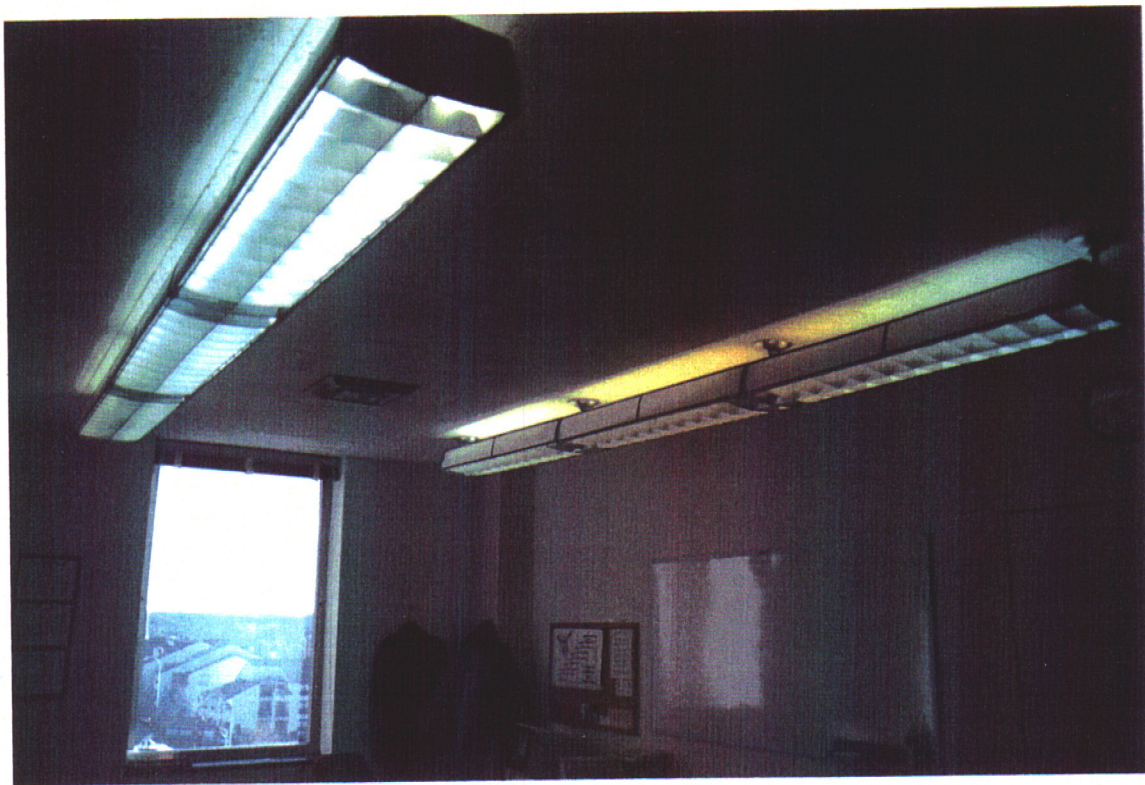
Existing 2' x 4' Surface Mounted Light Fixtures on Gypsum Board Tiled Ceiling

Sixth Floor

BUILDING ENGINEERING REPORT

Building Name: Federal Building - 517 Gold Avenue SW
Building No.: NM0024ZZ
Location: Albuquerque, New Mexico

Number: 410.3 Electrical
Title: Replace Lighting on Sixth Floor



Existing 1' x 4' Louvered Light Fixtures Pendant Mounted on Gypsum Board Tiled Ceiling

Sixth Floor

BUILDING ENGINEERING REPORT

Building Name: Federal Building – 517 Gold Avenue SW
 Building No.: NM0024ZZ
 Location: Albuquerque, New Mexico
 Number: 410.3 – Electrical

DETAILED COST ESTIMATE

ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Replace Lighting on Sixth Floor				
Lighting Removals	371	EA	\$13.25	\$4,915.75
New Light Fixtures	371	EA	\$175.00	\$64,925.00
Branch Circuit Revisions	1	LS	\$6,000.00	\$6,000.00
Subtotal				\$75,840.75
Mark-Up – 15% Contingency				\$11,376.11
Mark-Up – 18% Overhead and Profit				\$15,699.04
N.M. Gross Receipts Tax at 5.8125%				\$5,981.99
Total E. C. C.				\$108,897.88
Total E.C.C. (rounded)				\$109,000.00

BUILDING ENGINEERING REPORT (BER)

Building Name: Federal Building - 517 Gold Avenue SW
Building No: NM0024ZZ
Location: Albuquerque, New Mexico

WORK ITEM: Action required within 5 years X Action required within 5-20 years ____

Number: 440.1 - Space Improve and Conversion

Title: Initial Space Alterations - Tenant Work

Cost: FY 94: \$1,171,000 FY 98: \$1,595,000

DESCRIPTION:

After existing tenants move out of an area, new tenants require modifications of floor plans, finishes and utilities. This work item includes work to take an existing shell area and provide new partitions, doors, electrical and utility reconfiguration. Electrical and mechanical costs are included elsewhere.

JUSTIFICATION:

The building will be vacated and space must be re-captured to suit the need of new tenants.

ASSOCIATED WORK ITEMS:

For other related work see Work Item 310.1 for new finishes due to floor leveling, Work Item 315.1 for floor leveling, Work Item 410.2 for replacement of branch circuit wiring, and Work Item 515.1 for HVAC.